What is claimed is:

1   1.   A method of performing one or more of adding and removing a process in a distributed

2   system, said method comprising steps of:

3   (1) launching a probationary member in said distributed system;

4   (2) establishing at least one communication path between said probationary member and

5   at least one other process in said system;

6   (3) evaluating at least one criterion for promoting said probationary member to a full

7   member; and

8   (4) performing one of promoting said probationary member to a full member and

9   eliminating said probationary member based on the evaluation performed in step (3).

11   2.   The method of claim 1, wherein step (3) further comprises a step of:

2   determining whether said at least one criterion is satisfied.

1   3.   The method of claim 2, wherein said step (4) further comprises steps of:

2   promoting said probationary member to said full member in response to said at least one

3   criterion being satisfied; and

4   eliminating said probationary member in response to said at least one criterion not being

5   satisfied.

1   4.   The method of claim 1, further comprising a step of determining whether said

2   probationary member is replacing a mirror in said system.

1   5.   The method of claim 4, further comprising a step of:

2   performing a state transfer in response to said probationary member replacing said

3   mirror.

1   6.   The method of claim 1, wherein said probationary member is replacing a first process in

2   said system and step (4) further comprises a step of:

3   replacing said first process and promoting said probationary member to said full member

4   in a single view change.

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1   7.   The method of claim 6, wherein said step of replacing said first process and promoting

2   said probationary member further comprises a step of:

3   maintaining fault tolerance during said step of replacing said first process and promoting

4   said probationary member.

1   8.   The method of claim 7, wherein said at least one criterion is related to context

2   information.

1   9.   A distributed system including a plurality of processes in communication with each other,

2   said distributed system comprising:

3   a first host capable of executing a first process of said plurality of processes;

4   a second host capable of executing a second process of said plurality of processes;

5   at least one communication path connecting said first and second host; wherein

6   said second process is a probationary member evaluated using at least one criterion for

7   promoting said probationary member to a full member; and

8   said probationary member being either promoted to a full member or eliminated based on

9   the evaluation using said at least one criterion for promoting said probationary member to a full

10   member.

1   10.   The distributed system of claim 9, wherein said system is operable to promote said

2   probationary member to said full member in response to said at least one criterion being

3   satisfied; and

4   said system is operable to eliminate said probationary member in response to said at least

5   one criterion not being satisfied.

1   11.   The distributed system of claim 9, further comprising:

2   a third process; and

3   a fourth process; said third and fourth processes being in communication with each of

4   said processes in said system via multiple communication paths; wherein

5   said first, third and fourth processes are a fault tolerant unit in said system;

6   at least two of said first, third and fourth processes are mirrors; and

7   said probationary member is operable to replace one of said mirrors.

1   12.   The distributed system of claim 11, wherein said fault tolerant unit is operable to

2   maintain fault tolerance in response to said probationary member replacing one of said mirrors.

1   13.   A computer readable medium on which is embedded a program, the program executing a

2   method for performing one or more of adding and removing a process in a distributed system,

3   said method comprising steps of:

4   (1) launching a probationary member in said distributed system;

5   (2) establishing at least one communication path between said probationary member and

6   at least one other process in said system;

7   (3) evaluating at least one criterion for promoting said probationary member to a full

8   member; and

9   (4) performing one of promoting said probationary member to a full member and

10   eliminating said probationary member based on the evaluation performed in step (3).

1   14.   The computer readable medium of claim 13, wherein said step (3) in said method further

2   comprises a step of:

3   determining whether said at least one criterion is satisfied.

1   15.   The computer readable medium of claim 14, wherein said step (4) in said method further

2   comprises steps of:

3   promoting said probationary member to said full member in response to said at least one

4   criterion being satisfied; and

5   eliminating said probationary member in response to said at least one criterion not being

6   satisfied.

1   16.   The computer readable medium of claim 13, wherein said method further comprises a

2   step of determining whether said probationary member is replacing a mirror in said system.

1   17.   The computer readable medium of claim 16, wherein said method further comprises a

2   step of:

3   performing a state transfer in response to said probationary member replacing said

4   mirror.

1   18.   The computer readable medium of claim 13, wherein said probationary member is
2   replacing a first process in said system and step (4) in said method further comprises a step of:
3   replacing said first process and promoting said probationary member to said full member
4   in a single view change.

1   19.   The computer readable medium of claim 18, wherein said step of replacing said first
2   process and promoting said probationary member further comprises a step of:
3   maintaining fault tolerance during said step of replacing said first process and promoting
4   said probationary member.

1   20.   The computer readable medium of claim 19, wherein said at least one criterion is related
2   to context information.